

# Work Order ID 97419

February-19-13 11:57:49 AM

**\*97419\***

Page 1

Item ID: D206-667-247TRN

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Item Name: Crosstube Assembly, Mid Aft

Stop **\*NS2\***

Start Date: 2/19/13 Start Qty: 1.00 **\*1\***

Cust Item ID:

Required Date: 3/08/13 Req'd Qty: 1.00 **\*1\***

Customer:

Reference:

Approvals: Process Plan: *[Signature]* Date: 13-02-20 Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D206-667-247	A
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100

0.00

**\*100\***

Mori Seiki

Mori Seiki CNC Lathe Large

MORI SEIKI CNC LATHE LARGE

Memo

0.00

1-Fill tube with sand & install plugs DTxxxx on both ends as per Folio FB030

2-Turn first side as per Folio FB030

3-File down transition lines smooth.

FOLIO REV: A

DWG REV: B

1 Ø

*mmml*

13/02/28

110

QC1- Inspect dimensions to dimension sheet

0.00

**\*110\***

QC

Quality Control

Memo

0.00

1 Ø

*mmml*

13/02/28

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  <div style="display: flex; justify-content: space-around;"> <div>Rework <input type="checkbox"/></div> <div>Skid-tube <input type="checkbox"/></div> <div>Crosstube <input type="checkbox"/></div> <div>Water Jet <input type="checkbox"/></div> <div>Engineering <input type="checkbox"/></div> </div> <div style="display: flex; justify-content: space-around;"> <div>Scrap <input type="checkbox"/></div> <div>Machining <input type="checkbox"/></div> <div>Small Fab <input type="checkbox"/></div> <div>Prod. Eng. Coord. <input type="checkbox"/></div> <div>Quality <input type="checkbox"/></div> </div> <div style="display: flex; justify-content: space-around;"> <div>Use-as-is <input type="checkbox"/></div> <div>Thermoforming <input type="checkbox"/></div> <div>Finishing <input type="checkbox"/></div> <div>Rec/Store/Packaging <input type="checkbox"/></div> <div>Other <input type="checkbox"/></div> </div> <div style="display: flex; justify-content: space-around;"> <div>Work Order Update <input type="checkbox"/></div> <div>Large Fab <input type="checkbox"/></div> <div>Composite <input type="checkbox"/></div> <div>Supplier <input type="checkbox"/></div> </div>	
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Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

**FAULT CATEGORY**

Landing Gear	General	Other
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread
<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset
<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions
		<input type="checkbox"/> Ovalized
		<input type="checkbox"/> Over/Under tolerance
		<input type="checkbox"/> Part Incorrect
		<input type="checkbox"/> Part Lost/Missing
		<input type="checkbox"/> Part Moved
		<input type="checkbox"/> Positioned Wrong
		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

**\*97419\***

February-19-13 11:57:49 AM

**\*N900040100\***

Setup Start \*NS1\*

Stop **\*NS2\***

**Start Date:** 2/19/13      **Start Qty:** 1.00      **\*1\***

**Cust Item ID:**

**Required Date:** 3/08/13      **Req'd Qty:** 1.00      **\* 1 \***

**Customer:**

Run Start \*NR1\*

**Approvals:** \_\_\_\_\_ **Process Plan:** \_\_\_\_\_ **Date:** \_\_\_\_\_ **Tooling:** \_\_\_\_\_ **Date:** \_\_\_\_\_

Stop \*NR2\*

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

[illegible]

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width:100%; border: none;"> <tr> <td style="width:25%;">Skid-tube <input type="checkbox"/></td> <td style="width:25%;">Crosstube <input type="checkbox"/></td> <td style="width:25%;">Water Jet <input type="checkbox"/></td> <td style="width:25%;">Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>															
Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>															
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Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

**FAULT CATEGORY**

Landing Gear	General	Other
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<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete
<input type="checkbox"/> Crushed/Crimped	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabelled
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		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
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# Work Order ID 97419

February-19-13 11:57:49 AM

**\*97419\***

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Item ID: D206-667-247TRN

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Crosstube Assembly, Mid Aft

Start Date: 2/19/13 Start Qty: 1.00 **\*1\***

Cust Item ID:

Required Date: 3/08/13 Req'd Qty: 1.00 **\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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145

0.00

**\*145\***

Crosstubes

Memo

0.00

Crosstubes

GRIND ONLY TRANSITION LINES SMOOTH LONGITUDE WAY.

*LM* 13-03-05

150

0.00

**\*150\***

HandFXtube

Memo

0.00

Hand Finishing Crosstubes

1- PRESSURE WASH X-TUBE INSIDE AND OUT

2- ACID ETCH X-TUBE INSIDE AND OUT. USE RED SCOTCH BRITE

*JW* 13-03-05

160

QC5- Inspect part completeness to step on W/O

0.00

**\*160\***

QC

Memo

0.00

Quality Control

*LD* 13-3-6

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data									
Equip/Tooling									
Operator									
Material									
Setup									
Other									
Process									
Supplier									
Training									
Unapproved									

**FAULT CATEGORY**

Landing Gear	General	Other
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		<input type="checkbox"/> Power Loss/Surge
		<input type="checkbox"/> Pressure/Forced
		<input type="checkbox"/> Temperature/Cure
		<input type="checkbox"/> Weld
		<input type="checkbox"/> Wrong Stock Pulled
		<input type="checkbox"/> Other

# Work Order ID 97419

**\*97419\***

Page 4

February-19-13 11:57:49 AM

Item ID: D206-667-247TRN

Accept

**\*N900040100\***

Setup Start **\*NS1\***

Revision ID:

Stop **\*NS2\***

Item Name: Crosstube Assembly, Mid Aft

Start Date: 2/19/13 Start Qty: 1.00 **\*1\***

Cust Item ID:

Required Date: 3/08/13 Req'd Qty: 1.00 **\*1\***

Customer:

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Run Start **\*NR1\***

QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop **\*NR2\***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
170		0.00							
<b>*170*</b>	Packaging								
Packaging	Memo	0.00							
Packaging	Identify and stock in kanban rack Location: <u>LG</u>								
180		0.00							
<b>*180*</b>	QC21- Final Inspection - Work Order Release								
QC	Memo	0.00							
Quality Control									

MO 13/03/07

13/3/17 18

13-03-7

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____				<b>DISPOSITION</b>  <div style="display: flex; justify-content: space-around;"> <div> <input type="checkbox"/> Rework  <input type="checkbox"/> Scrap  <input type="checkbox"/> Use-as-is  <input type="checkbox"/> Work Order Update         </div> <div> <input type="checkbox"/> Skid-tube  <input type="checkbox"/> Machining  <input type="checkbox"/> Thermoforming  <input type="checkbox"/> Large Fab         </div> <div> <input type="checkbox"/> Crosstube  <input type="checkbox"/> Small Fab  <input type="checkbox"/> Finishing  <input type="checkbox"/> Composite         </div> <div> <input type="checkbox"/> Water Jet  <input type="checkbox"/> Prod. Eng. Coord.  <input type="checkbox"/> Rec/Store/Packaging  <input type="checkbox"/> Supplier         </div> <div> <input type="checkbox"/> Engineering  <input type="checkbox"/> Quality  <input type="checkbox"/> Other         </div> </div>	
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# Picklist Print

February-19-13 11:57:49 AM

Page 1

Work Order ID: 97419

Parent Item: D206-667-247TRN

Start Date: 2/19/13

Required Date: 3/08/13

Parent Item Name: Crosstube Assembly, Mid Aft

Start Qty: 1.00

Required Qty: 1.00

Comments: IPP rev:A 11.01.06 new issue DD verf:EC

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D6004-115 Crosstube Material		Manufactured	No			100	Each	60.0000	1	1			

Location

Loc Qty

Loc Code

LG015

60

34685

1

5632

20

75636

39

1 mml 13/02/28

NCR: Yes / No

**WORK ORDER NON-CONFORMANCE / UPDATE**

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order: _____  Part No. _____  NCR No. _____	<b>DISPOSITION</b>  Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	<b>AGAINST DEPARTMENT/PROCESS</b>  <table style="width: 100%;"> <tr> <td>Skid-tube <input type="checkbox"/></td> <td>Crosstube <input type="checkbox"/></td> <td>Water Jet <input type="checkbox"/></td> <td>Engineering <input type="checkbox"/></td> </tr> <tr> <td>Machining <input type="checkbox"/></td> <td>Small Fab <input type="checkbox"/></td> <td>Prod. Eng. Coord. <input type="checkbox"/></td> <td>Quality <input type="checkbox"/></td> </tr> <tr> <td>Thermoforming <input type="checkbox"/></td> <td>Finishing <input type="checkbox"/></td> <td>Rec/Store/Packaging <input type="checkbox"/></td> <td>Other <input type="checkbox"/></td> </tr> <tr> <td>Large Fab <input type="checkbox"/></td> <td>Composite <input type="checkbox"/></td> <td>Supplier <input type="checkbox"/></td> <td></td> </tr> </table>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coord. <input type="checkbox"/>	Quality <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>	
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Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
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Setup									
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Process									
Supplier									
Training									
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**FAULT CATEGORY**

Landing Gear	General		
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain	<input type="checkbox"/> Ovalized
<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware	<input type="checkbox"/> Over/Under tolerance
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<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Wrong Stock Pulled
			<input type="checkbox"/> Other

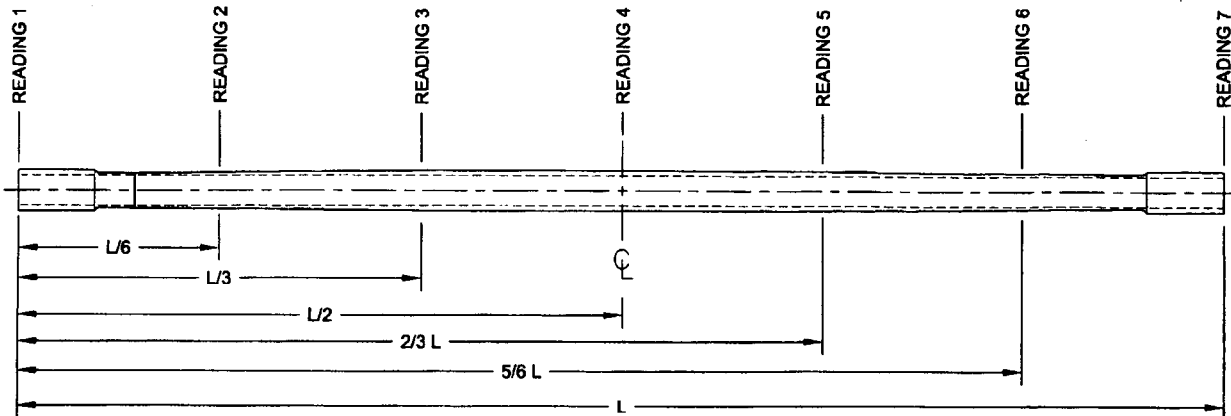
<b>DART AEROSPACE LTD</b>	<b>Work Order:</b> 91419
<b>Description:</b> Crosstube Assembly, Mid Aft	<b>Part Number:</b> D206-667-247TRN
<b>Inspection Dwg:</b> D206-667-247 Rev: A	<b>Page 1 of 2</b>

### FIRST ARTICLE INSPECTION CHECKLIST

	Inspection Sheet Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
SIDE A	2.490	+0.005/-0.000	2.493	/		vern	CNC-08
	2.025	+0.005/-0.000	2.029	/			
	2.079	+0.005/-0.000	2.083	/			
	2.145	+0.005/-0.000	2.149	/			
	2.209	+0.005/-0.000	2.213	/			
	2.287	+0.005/-0.000	2.290	/			
	2.363	+0.005/-0.000	2.366	/		↓	
	0.200	+/-0.010	.200	-		vern	CNC-08
	R0.063	+/-0.010	.063	/		RG	
	R2.00	+/-0.010	2.00	/		"	
	R0.063	+/-0.010	.063	/		"	
	4.438	+/-0.010	4.438	/		vern	CNC-08
SIDE B	2.490	+0.005/-0.000	2.493	-		vern	CNC-08
	2.025	+0.005/-0.000	2.029	/			
	2.079	+0.005/-0.000	2.083	/			
	2.145	+0.005/-0.000	2.148	/			
	2.209	+0.005/-0.000	2.212	/			
	2.287	+0.005/-0.000	2.290	-			
	2.363	+0.005/-0.000	2.366	/		↓	
	0.200	+/-0.010	.200	/		vern	CNC-08
	R0.063	+/-0.010	.063	/		RG	
	R2.00	+/-0.010	2.00	/		"	
	R0.063	+/-0.010	.063	/		"	
	4.438	+/-0.010	4.438	/		vern	CNC-08
	99.76	+/-0.020	99.76	-		tape	LG-15

<b>DART AEROSPACE LTD</b>	<b>Work Order:</b> 97479
<b>Description:</b> Crosstube Assembly, Mid Aft	<b>Part Number:</b> D206-667-247TRN
<b>Inspection Dwg:</b> D206-667-247 Rev: A	<b>Page 2 of 2</b>

### WALL THICKNESS MEASUREMENT



Location	WALL THICKNESS MEASUREMENT (IN)				Deviation $\Delta w$ (max-min)	TOLERANCE
	w1	w2	w3	w4		
READING 1 L = 0"	.352	.343	.353	.361	-.018	0.045"
READING 2 L = 11	.159	.148	.155	.165	-.017	
READING 3 L = 23	.243	.232	.234	.247	.015	
READING 4 L = 49	.360	.345	.351	.365	.020	
READING 5 L = 23	.237	.228	.238	.247	.019	
READING 6 L = 11	.155	.148	.160	.165	-.017	
READING 7 L = CWFF	.347	.343	.353	.360	-.017	

#### Calibration Result

Actual Block Thickness: .100 .750

SITESCAN 250 Measured Thickness: .100 .750

<b>Measured by:</b> mmml
<b>Date:</b> 13/03/04

<b>Audited by:</b> JW
<b>Date:</b> 13-03-04

<b>Preliminary Approval:</b>
<b>Date:</b>

Rev	Date	Change	Revised by	Approved
A	11.06.21	New Issue	KJ	
B	12.02.02	Dimension 4.438 was 4.500	KJ	
C	12.06.01	Wall thickness form added	KJ	

Item	Qty -247	Part Number	Description
1	X	D206-667-247	CROSSTUBE ASSEMBLY (206L MID AFT)
2	1	D6004-115	CROSSTUBE
3	2	D2873-043	NUT PLATE
4	2	D2873-045	NUT PLATE
5	2	D2892-1	SUPPORT
6	4	D3595-063-450	RUBBER CUSHION
7	4	MS21920-22	CLAMP
8	14	MS20601AD4W10	RIVET (OR NAS9302B-4-10)
9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299- 947-100, TYPE II, CLASS 2 ADHESIVE)

#### GENERAL NOTES:

- 1) MATERIAL: MANUFACTURED FROM D6004-115  
FINISHED LENGTH = 99.76±0.020
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1  
PRIME INSIDE AND OUTSIDE PER DART QSI 005 4.2  
PAINT OUTSIDE PER DART QSI 005 4.2
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED.
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX.
- 6) IDENTIFICATION: SCRIBE DART PART NUMBER "D206-667-247" AND BATCH NUMBER ON  
INSIDE OF CUFF PER DART QSI 044 6.4 (VIBRATING STYLUS).
- 7) WEIGHT: 21.1 lbs (-607 = 17.7 lbs)
- 8) PART IS SYMMETRIC ABOUT CENTERLINE.
- 9) RUN CUTTER OFF PART WHERE INDICATED. BLEND OUT EDGE LONGITUDINALLY.  
TRANSITION SHOULD BE SMOOTH.
- 10) BEND PROGRESSIVELY WITH A MINIMUM OF 10 PASSES. MAXIMUM TUBE FLATTENING DUE  
TO BENDING IS 6% BASED ON O.D.
- 11) LIQUID PENETRANT INSPECT OUTSIDE SURFACE OF CROSSTUBE PER QSI 038.
- 12) INSTALL D2892-1 SUPPORT USING 0.03" TO 0.05" THICK LAYER OF MAGNOBOND 6398 PER QSI  
015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.
- 13) INSTALL MS21920-22 CLAMPS WITH D3595-063-450 RUBBER CUSHIONS TO SECURE THE  
D2892-1 SUPPORT ON TOP SIDE OF THE CROSSTUBE. ENSURE CLAMP MECHANISMS ARE  
LOCATED ON CROSSTUBE SUPPORTS.
- 14) EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE  
OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS  
SCRATCHES, NICKS, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT  
LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
- 15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS ARE SHOWING IN  
SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

97419  
13-02-20

DEO ATTACHED

OCU #11-615  
11.07.28

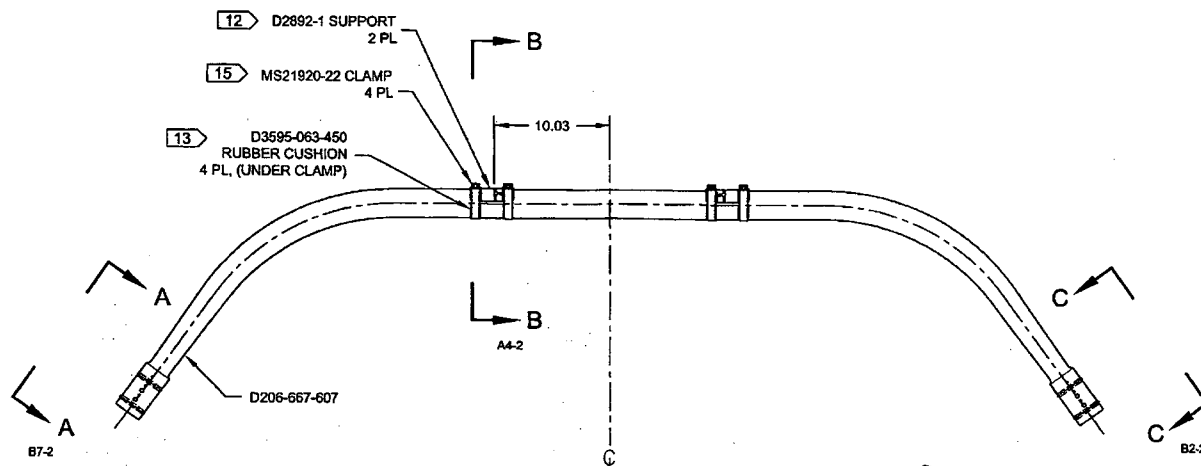
UNDER REVIEW

RELEASED  
2011-05-24

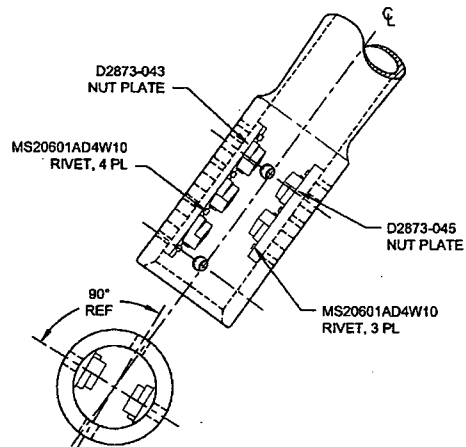
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REV.	DESCRIPTION	BY	DATE
DESIGN			
DRAWN			
CHECKED			
MFG. APPR.			
APPROVED			
DE APPR.			
DATE	10.12.23		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D206-667-247	REV. A SHEET 1 OF 4
TITLE CROSSTUBE ASS'Y (206L MID AFT)	SCALE NTS
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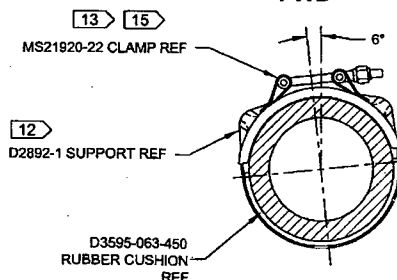
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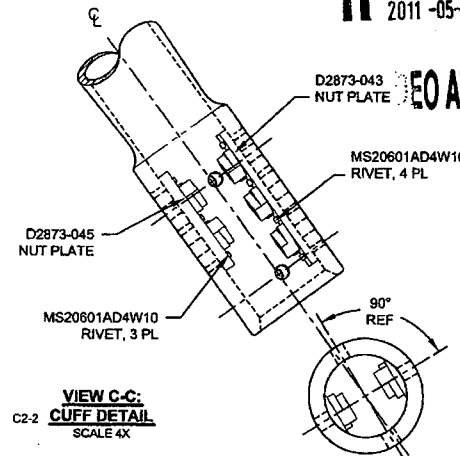
**D206-667-247**  
**ASSEMBLY DETAIL**  
(VIEW LOOKING FWD)



**VIEW A-A:**  
**CUFF DETAIL**  
SCALE 4X



**SECTION B-B**  
SCALE 5X



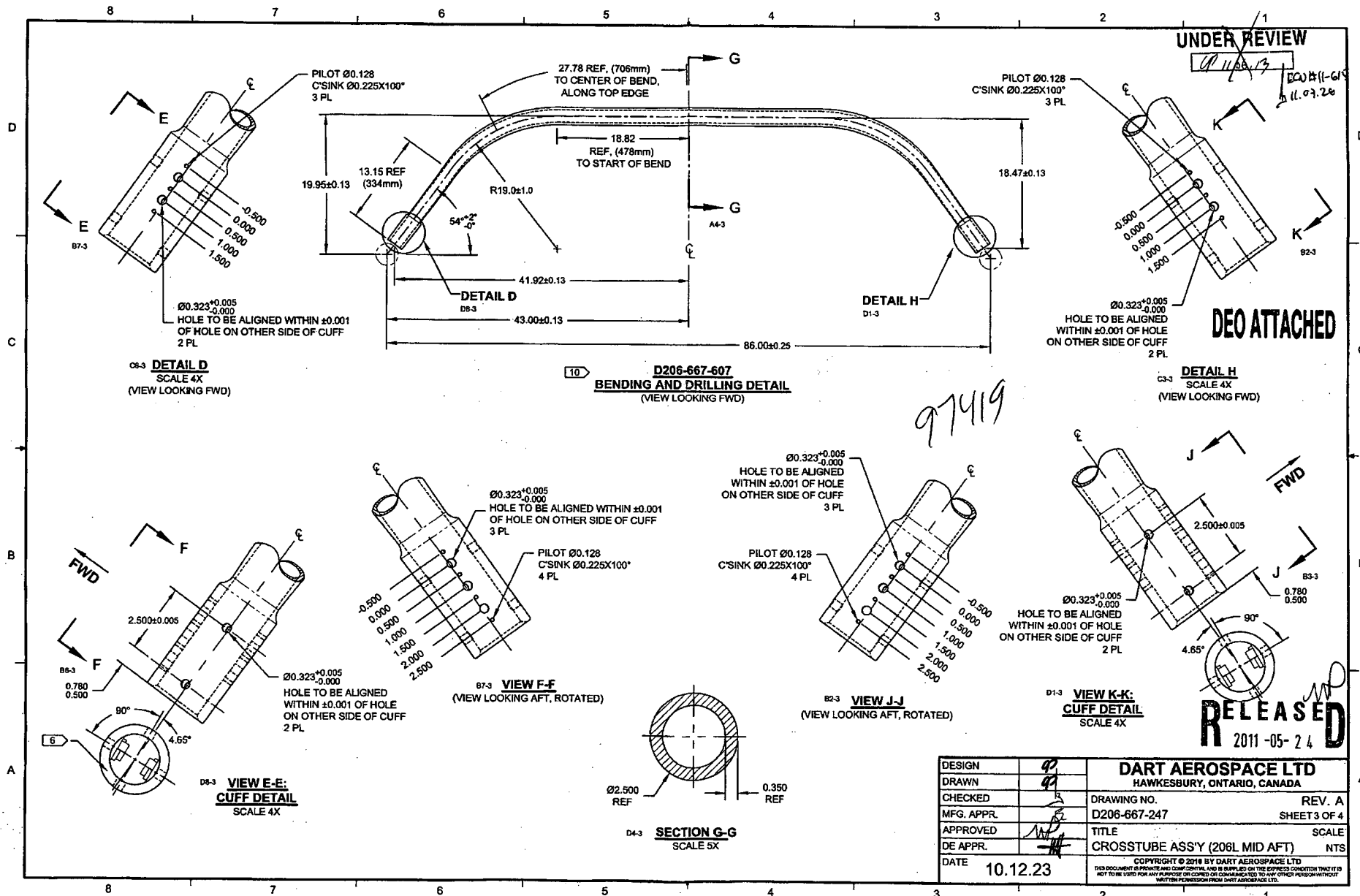
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**CUFF DETAIL**  
SCALE 4X

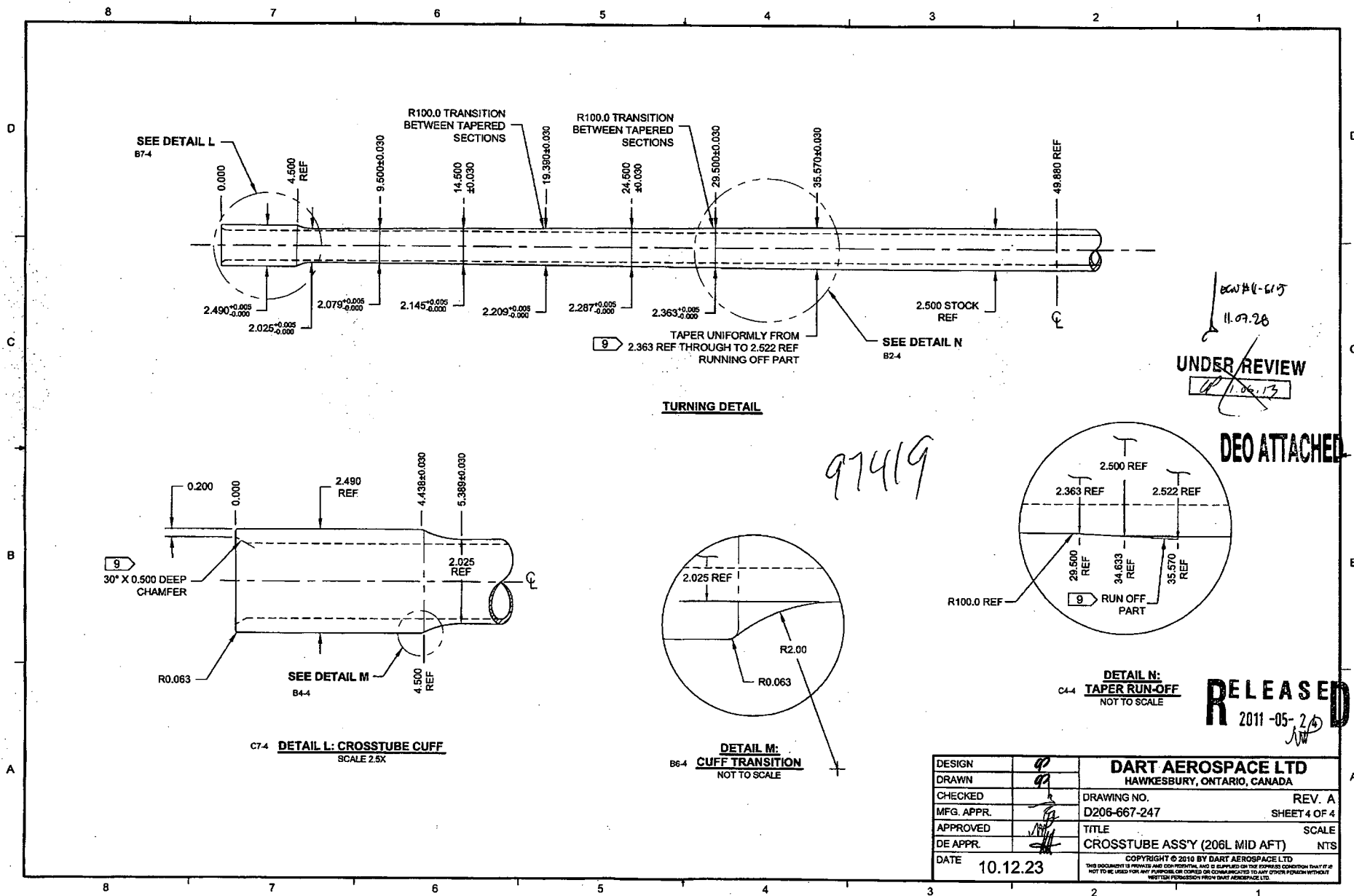
600 H(-615)  
11.07.28  
**UNDER REVIEW**  
11.06.13

**RELEASED**  
2011-05-24

**EO ATTACHED**

DESIGN	97	<b>DART AEROSPACE LTD</b>	
DRAWN	97	HAWKESBURY, ONTARIO, CANADA	
CHECKED	97	DRAWING NO.	REV. A
MFG. APPR.	97	D206-667-247	SHEET 2 OF 4
APPROVED	97	TITLE	SCALE
DE APPR.	97	CROSSTUBE ASS'Y (206L MID AFT)	NTS
DATE	10.12.23	COPYRIGHT © 2010 BY DART AEROSPACE LTD	
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DRAWING NO. D206-667-247	TITLE CROSSTUBE ASS'Y (206L MID AFT)	REV. A	<b>DART AEROSPACE LTD ENGINEERING ORDER</b>		D.E.O. NO. D206-667-247-A-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN 97	CHECKED ASS	MFG. APPR. KD	APPROVED JMD		DE APPR. #		
DATE 11.07.15	DATE 11.07.20	DATE 11.07.21	DATE 11/07/21		DATE 11.07.21		

**PURPOSE:**

REPLACE MAGNOBOND WITH PROSEAL.

**CHANGE:**

IS:

Item	Qty -247	Part Number	Description
9	A/R	PROSEAL 890 B-2	SEALANT, AMS-S-8802 CLASS B-2

WAS:

9	A/R	MAGNOBOND 6398	ROCKWELL SPECIFICATION RBO-120-023 ADHESIVE (TEXTRON/BELL SPEC. 299-947-100, TYPE II, CLASS 2 ADHESIVE)
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NOTE 12 & 15, SHEET 1 IS AMENDED AS FOLLOWS:

IS:

12) TO INSTALL D2892-1 SUPPORT: ABRASE MATING SURFACE OF SUPPORT AND CROSSTUBE WITH 180-GRIT SANDPAPER AND REMOVE RESIDUE WITH MEK (OR EQUIVALENT). APPLY A 0.04" TO 0.07" THICK LAYER OF PROSEAL 890 CLASS B-2 (OR AMS-S-8802 CLASS B-2) SEALANT TO MATING SURFACE OF SUPPORT.

15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING. **PRIOR TO PACKAGING, RE-CHECK TORQUE ON CLAMPS AFTER PROSEAL 890 SEALANT HAS CURED FOR 72 HOURS.**

WAS:

12) INSTALL D2892-1 SUPPORT USING 0.03" TO 0.06" THICK LAYER OF MAGNOBOND 6398 PER QSI 015. LET CURE FOR 12 HOURS AFTER INSTALLATION AND PRIOR TO PACKAGING.

15) TORQUE CLAMPS 80 TO 100 IN-LB. ENSURE AT LEAST 1.5 THREADS SHOWING IN SAFETY AND THAT NUT HAS NOT BOTTOMED-OUT AFTER TORQUING.

97419

RELEASED  
2011-07-28  
JMD